

Levittown Dump
Levittown, Pennsylvania
TDD No. F3-8008-02
EPA No. PA-282

ORIGINAL
(Red)

FIELD TRIP REPORT

INTRODUCTION:

FIT III conducted a Site Inspection/Sampling of the Levittown Dump and St. Michael's Elementary School on November 1, 1980. The FIT III Team consisted of W. Sandvik, A. Fuscaldo, J. McGovern, T. Shannon, G. Crystall, M. Slam, and A. Stone. Also in attendance were R. King - Ecology and Environment Assistant National Program Manager for training and safety, and Janet Luffy - EPA Office of Public Awareness.

Water samples were taken of the Pennsylvania Canal and Levittown Lake. Soil samples were taken in the crawl space under the school and on the landfill. Two wells which were to have been sampled were closed for the winter and, therefore, were not sampled. Due to the extremely dry conditions during the summer and fall, a prerequisite of three (3) days of heavy rainfall was established prior to the sampling. This condition was not completely met, however, several days of moderate rainfall did occur prior to the Site Inspection/Sampling.

Permission to enter the school to take samples was obtained from Mr. Patrick Priore and Sister James Maria of St. Michaels Church and School.

CONTACTS:

[REDACTED]
Pastor of St. Michaels Church

[REDACTED]
Maintenance man
St. Michaels Church

[REDACTED]
St. Michaels School

PERTINENT COMMENTS:

Unidentified Local Resident Alleged that local garbage disposal trucks flush out liquids from their dumpsters into Levittown Lake.

Maintenance Staff and several teachers at school reported that odors became so strong in one classroom that at times it could not be used.

OBSERVATIONS:

The following observations were made during the site visit:

- No runoff or erosion was apparent.
- No leachate or signs of leachate entering the school were observed.

OBSERVATIONS:

Continued:

- A strong Hydrocarbon odor was noted at various points on the landfill.
- The OVA detected as much as two (2) ppm above background at times on the landfill.
- Draeger tube readings for mercaptans were negative.
- Six relatively new empty drums were noted on-site as well as several older, rusted drums. The newer drums were labelled Johnson Wax Products, and Petrochemical Products, Inc. of Long Island City, New York.
- Six empty one gallon fungicide containers were found in the crawl space.
- Recent repair work to steam pipes in the crawl space was discovered. This may have been the source of liquid which was reported in the crawl space.
- A pungent odor was noted when first opening the door to the crawl space. The odor could not be readily identified, however, various team members reported it as musty, acrid, pungent, etc.
- Only patches noted on landfill.
- Site completely accessible to public (i.e. two teenagers used it as short cut; hunters bagged five rabbits while we were on-site).
- Photographs were taken of crawl space, each of the sampling sites on the landfill, off-site sampling locations, various locations on landfill for purposes of orientation and items of interest such as new or rusty drums.

ACTION ITEMS:

Wayne Lynn - Pa. DER has requested that sample results be forwarded to his office.

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Levittown, Pennsylvania
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SAMPLE LOG

Case number: 303

The following liquid samples were sent to VERSAR Labs for inorganic analysis:

<u>Traffic Report Number</u>	<u>Description</u>	<u>Time</u>	<u>Date</u>
MC 8106	Levittown Lake	12:20	11-1-80
MC-8107	Pennsylvania Canal Downstream	12:36	11-1-80
MC-8108	Pennsylvania Canal Upstream	12:50	11-1-80
MC-8108	Blank		

The following liquid samples were sent to California Analytical Lab for organic analysis:

C-0329	Levittown Lake	12:20	11-1-80
C-0072	Pennsylvania Canal Downstream	12:36	11-1-80
C-0073	Pennsylvania Canal Upstream	12:50	11-1-80
C-0074	Blank		

The following samples were sent to N.E.I.C for extraction:

3-0591	Pipe Chase Residue Sample	13:30	11-1-80
3-0596	Oily discolored landfill sample	15:05	11-1-80

TDD Number _____
EPA Number PA-282

Site Name Levittown Dump
Date of Sample 11/1/80

☒ Organic ☐ Inorganic[illegible]

TDD Number _____
EPA Number PA-282

Date of Sample 11/1/80

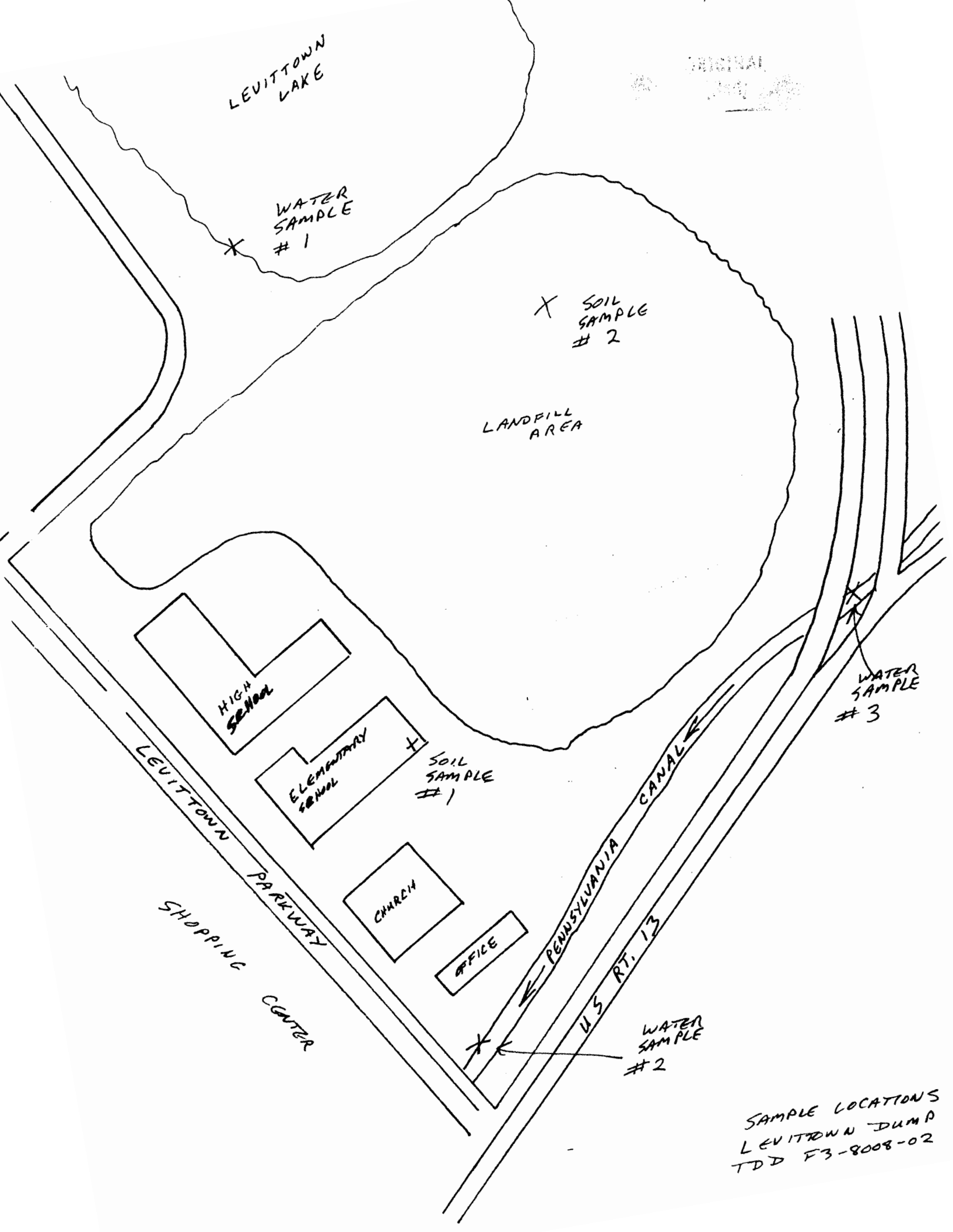
☐ Organic ☒ Inorganic[illegible]

☐ Organic ☒ Inorganic

Date of Sample 11/1/80

Compounds Detected

[illegible]



LEVITTOWN LAKE

WATER SAMPLE #1

SOIL SAMPLE #2

LANDFILL AREA

HIGH SCHOOL

ELEMENTARY SCHOOL

SOIL SAMPLE #1

CHURCH

OFFICE

LEVITTOWN PARKWAY
SHOPPING CENTER

PENNSYLVANIA CANAL
U.S. RT. 13

WATER SAMPLE #3

WATER SAMPLE #2

SAMPLE LOCATIONS
LEVITTOWN DUMP
TDD F3-8008-02

AMBIENT AIR SAMPLING AND ANALYSIS

Levittown Landfill Site (TDD #F3-8111-03A)

Levittown, Pennsylvania

12 July 1982

The following sections describe the objectives, approach and results of a one-day ambient air sampling program carried out at the Levittown Landfill Site in Levittown, Pennsylvania on 12 July 1982 (TDD #F3-8111-03A). The scope of work involved collecting air monitoring data at the site and in two adjacent school buildings where complaints of odors were reported in the spring of 1982. It should be recognized that the conditions (e.g., water table elevations, rainfall) present when odor complaints occurred are not likely to have been duplicated on the day the air monitoring took place. Any subsequent air monitoring work, specifically if odors again occur inside the building, should take place under those conditions.

1. OBJECTIVE:

At the request of the Region III Field Investigation Team (FIT) a one-day air sampling program was conducted on 12 July 1982 at the Levittown Landfill in Levittown, Pennsylvania. The air sampling was conducted as a result of a report of strong odors present inside elementary and high school buildings adjacent to the landfill site. Previous soil and surface water sampling by the Region III FIT showed no evidence of site-related contaminants; however, the Region III Technical Assistance Team (TAT) reported high readings from a combustible gas indicator and organic vapor analyzer (OVA) when surveying was performed inside a janitor's closet at the high school.

The over-all objective of the air sampling was to determine if any airborne contaminants were present inside the buildings or on the landfill site; and to possibly establish if site-related contaminants were responsible for the odors inside the school buildings.

2. APPROACH:

2.1 GENERAL APPROACH

The approach employed by the FIT was to use a highly sensitive portable gas chromatograph (GC) which is capable of detecting a wide variety of organic and inorganic airborne contaminants at concentrations ranging from as low as 0.1 parts per billion (ppb) to 100 parts per million (ppm). Grab samples of air from inside and outside the school buildings were obtained with a gas-tight syringe and injected directly into the GC. In addition, one upwind and two downwind air sampling stations were set up around the perimeter of the landfill. Portable air sampling pumps were used to collect air samples on activated charcoal tubes over a two hour period. The charcoal tubes were subsequently thermally desorbed and analyzed by GC.

2.2 SITE SPECIFIC APPROACH

- o Elementary School Building - Prior to obtaining samples for GC analysis from inside the rear portion of the elementary school building, a combustible gas indicator and an HNu Systems Portable Photoionizer were used to survey a crawl space area. No readings were noted on the combustible gas indicator and no readings above ambient were noted on the HNu. In addition, an OVA was used to survey the crawl space area and no readings above ambient were noted. Several 1 cubic centimeter (cc) air samples were obtained from the crawl space and from the first floor corridor of the building by using a gas-tight syringe. In addition several 1 cc grab samples of ambient air were taken from a location between the building and the landfill. All samples were injected into the GC. In between the air sample injections, injections of several volatile organic standards were run, including benzene, 1,1,1- trichloroethane, trichloroethylene, tetrachloroethylene and vinyl chloride. The sample locations and volumes are tabulated below:

<u>Sample #</u>	<u>Location</u>	<u>Sample Volume</u>
1	Inside back door, elementary school building	1 cubic centimeter (cc)
2	Same as #1	250 microliters (ul)
3	Same as #1	1 cc
4	Ambient air, between landfill and elementary school building	1 cc
5	Crawl space of elementary school building	1 cc
6	Same as #5	1 cc
7	Same as #4	1 cc
8	Same as #4	1 cc

A discussion of the results and conclusions is presented in Section 3.

- o Landfill/Time Integrated Samples - Portable air sampling pumps and activated charcoal-filled stainless steel tubes were used to collect time-integrated air samples at three points (refer to site sketch for locations of sampling points). The samples were collected over a two-hour period at a flow rate of approximately one liter per minute. Flow rates were measured at each station at the start and completion of the sampling period. The pumps were mounted

2.2 Site Specific Approach - continued

at a height of about four feet on posts fixed in the ground. The charcoal tubes had been prepared by being cycled five times in a thermal desorber at a temperature of 250°C. A sample of the air from the final desorption of each tube was injected into a GC to check for cleanliness. The tubes were then stored in clean 44 ml vials with Teflon-lined caps until used for sampling. At the conclusion of sampling, the tubes were returned to their vials and stored on ice until they could be desorbed and analyzed. A blank tube was stored and handled in the same manner. See Section 3 for a discussion of the results and conclusions. Attachment 1 provides specifications on the instrumentation used.

- o High School Building Janitor's Closet - Prior to obtaining samples for GC analysis from the janitor's closet in the high school, a combustible gas indicator, HNu Photoionizer and OVA were used to survey inside the closet. Readings of between 10% and 20% of the lower explosive limit (LEL) were noted on the combustible gas indicator, when the sampling line was placed in a sump located in the floor of the closet. Readings on the OVA were in excess of 1000 ppm. No readings were noted on the HNu photoionizer. Two samples of the air inside the closet (from the sump) were obtained with a gas tight syringe and injected directly into the GC. In addition, an ambient air sample obtained outside the high school building was injected directly into the GC. The sample locations and volumes are tabulated below. See Section 3 for a discussion of the results and conclusions.

<u>Sample #</u>	<u>Location</u>	<u>Sample Volume</u>
9	Sump in floor of janitor's closet, high school building	1 cc
10	Same as #9	1 cc
11	Ambient air, outside of high school building	1 cc

Following the analysis of samples 9 through 11 on the portable GC, the OVA was set up for GC analysis in order to confirm the suspicion that the principal contaminant inside the sump was methane gas. Several 100 microliter samples of air inside the closet were obtained by gas-tight syringe and injected into the OVA. See Section 3 for a discussion of the results and conclusions.

3. RESULTS AND CONCLUSIONS:

3.1 ELEMENTARY SCHOOL BUILDING

The chromatograms of samples 1 through 9, which were grab samples obtained with a gas tight syringe from the corridor of the building, the crawl space and ambient air outside the building, were virtually identical. For each of these samples, three rapidly eluting peaks were recorded, all eluting from the column in less than a minute. Although not identified, those peaks were characteristic of several straight-chain hydrocarbons which are common constituents of ambient air. Chromatograms were allowed to run for several minutes, at which time carrier gas flow in the column was reversed. This technique allows a rapid determination as to whether more slowly moving constituents of the air sample were present. Any of these types of compounds are carried to the detector and recorded as a "backflush" peak. No backflush response was noted for any of the above samples. In between the analysis of samples #1 through 8. Injections of a variety of known volatile compounds were made in order to establish retention times.

On the basis of the response shown by the combustible gas indicator, HNu Photoionizer, OVA and highly sensitive portable GC, it is concluded that no volatile airborne contaminants, such as those typically associated with waste disposal, were present in the crawl space, the corridor, or outside the building between the landfill and the elementary school.

3.2 LANDFILL/TIME - INTEGRATED SAMPLES

The three time-integrated air samples collected by pulling ambient air through an activated charcoal-filled stainless steel tube were stored at 4°C until they were thermally desorbed and analyzed on 27 July 1982. Analysis of these samples was delayed by equipment problems. Refer to the site sketch for sample locations. The sample designations and total volumes of air sampled are tabulated below.

3.2 Landfill/Time - continued

<u>Sample #</u>	<u>Location with respect to wind direction on-site</u>	<u>Total air volume sampled</u>
Tube # 6	Upwind	120 liters
Tube #11	Downwind	129.6 liters
Tube # 7	Downwind	100.44 liters
Tube # 4	Blank	

The charcoal tubes were thermally desorbed at 250°C and analyzed on the Photovac 10A10 Portable GC. None of the samples showed the presence of volatile contaminants which would have been adsorbed by the charcoal. It is concluded that no detectable levels of airborne contaminants were present at the landfill.

3.3 HIGH SCHOOL BUILDING/JANITOR'S CLOSET

Samples #9 and #10 were obtained from the sump in the floor of the closet. The chromatograms of those samples exhibited two peaks eluting in 10-30 seconds. These peaks are characteristic of straight-chain hydrocarbons such as ethane and butane. There was no indication of the presence of other volatile compounds, nor was there an indicator of more slowly moving compounds when the column was backflushed. An ambient air sample obtained outside the high school building was injected and the chromatogram recorded was identical to those of ambient air samples run earlier. There was no indication of landfill-related contaminants.

The air samples obtained from the closet which were analyzed on the OVA most likely contained methane gas. Although no methane standard was available, the lack of response by the HNu photoionizer and the Photovac GC, coupled with the response of the combustible gas indicator and OVA, both as a survey instrument and a GC, strongly support the presence of methane. This is also supported by the instrument responses noted previously by the Region III TAT.

ATTACHMENT 1 - INSTRUMENTATION

Photovac 10A10 Portable Gas Chromatograph

Specifications:

Ultimate Sensitivity: 100 parts per trillion (benzene)
Detector: Photovac P3000 vacuum ultra violet
photoionizer system
Column: Four foot SE30; 5% on 60/80 mesh
Chromosorb G
Carrier Gas: Ultra Zero Air
Flow Rate: 10 milliliters/minute
Temperature: Ambient: Noted to be approximately 85°F for much of
the day.
Recorder: Esterline-Angus MS4111313 II

Air Sampling Pumps - duPont P-4000

Thermal Desorber - Century systems (Foxboro) PTD 132-A

F3-8111-03-07

Region III (Cont.)

On June 9, TAT members Robert Caron and Roger Meyer were dispatched by EPA to conduct a perimeter and on-site inspection of the Levittown dump in Levittown, Pennsylvania. An Hnu, OVA, oxygen meter, explosimeter, and draeger tubes were used to perform air monitoring. The TAT inspected an elementary school building nearby and detected low amounts of methane. High readings were obtained at a high school building, particularly in a sump in a janitor's closet which indicated a potential explosive atmosphere of 100 LEL. The draeger tubes showed positive readings of vinyl chloride. There were also cleaning solutions stored in the closet. The TAT reported to the EPA OSC who notified the fire marshal and school officials. On June 11, TAT member Karen Smith accompanied Mr. Meyer and EPA and Pennsylvania DER representatives to the high school, but the instruments did not reproduce the explosive atmosphere readings.

Levittown Dump
TDD No. F3-8111-03
EPA No. PA-282
Field Trip Report

2.5 SAMPLE LOG (SEE APPENDIX FOR AIR SAMPLES)

2.5.1 Organic Sample Log

Sample No.	TR No.	pH/Conductivity	Description	Phase/ Concentration	Date	Time	Tag No.'s
1	CI709	5.8/280 u ohms	Upstream Pennsylvania Canal	Aqueous/Low	07/14/82	1015	3-11114-16
2	CI710	8.75/210 u ohms	Levittown Lake	Aqueous/Low	07/14/82	1030	3-11117-19
3	CI711	7.15/200 u ohms	Downstream Pennsylvania Canal	Aqueous/Low	07/14/82	1048	3-11120-22
4	CI712	6.0/490 u ohms	Well #1 (59' deep)	Aqueous/Low	07/14/82	1115	3-11123-25
5	CI713	6.1/700 u ohms	Well #3 (59' deep)	Aqueous/Low	07/14/82	1130	3-11126-28
	CI714	-	Sample Blank (Low Concentration Aqueous)	Aqueous/Low	-	-	3-11139-31
2A	CI715	-	Lake Sediment	Solid/Low	07/14/82	1030	3-11146
	CI716	-	Sample Blank (Low Concentration Solid)	Solid/Low	-	-	3-11147

SAMPLES ANALYZED BY WEST COAST TECHNICAL SERVICE

2.5.2 Inorganic Sample Log

Sample No.	TR No.	Description	Phase/ Concentration	Date	Time	Tag No.'s Tasks 1 & 2	Task 3 (CN)
1	MC9285	Upstream Pennsylvania Canal	Low/Aqueous	07/14/82	1015	3-11132	3-11133
2	MC9286	Levittown Lake	Low/Aqueous	07/14/82	1030	3-11134	3-11135
3	MC9287	Downstream Pennsylvania Canal	Low/Aqueous	07/14/82	1048	3-11136	3-11137
4	MC9288	Well #1	Low/Aqueous	07/14/82	1115	3-11138	3-11139
5	MC9289	Well #3	Low/Aqueous	07/14/82	1130	3-11140	3-11141
	MC9290	Sample Blank	Low/Aqueous	-	-	3-11142	3-11143
2A	MC9291	Lake Sediment	Low/Solid	07/14/82	1030		3-11144
	MC9292	Sample Blank	Low/Solid	-	-		3-11145

SAMPLES ANALYZED BY ROCKY MOUNTAIN ANALYTICAL LAB

1994

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(2-ethyl hexyl)
phthalate

Element/Compound Name	Atomic Weight	Atomic Number	Symbol	Group	Period	Block	Electron Configuration	Electronegativity	Ionization Energy (kJ/mol)	Electron Affinity (kJ/mol)	Atomic Radius (pm)	Covalent Radius (pm)	Van der Waals Radius (pm)	Melting Point (°C)	Boiling Point (°C)	Density (g/cm³)	Phase at STP	Common Oxidation States	Common Compounds	Biological Role	Environmental Impact	Health Effects	Other Notes	
Hydrogen	1.008	1	H	1	1	s	1s ¹	2.20	1312	-73	37	31	120	-253	-253	0.09	Gas	+1, 0	H ₂ , H ₂ O, CH ₄	Essential for life	Flammable, explosive	Asphyxiant		
Helium	4.0026	2	He	18	1	s	1s ²	2.20	2372	0	31	28	140	-272	-269	0.179	Gas	0	He, He compounds	Inert gas	Non-flammable, non-toxic	None		
Lithium	6.941	3	Li	1	2	s	1s ² 2s ¹	0.98	520	-60	152	138	167	180	1342	863	0.534	Solid	+1, 0	Li ₂ O, LiCl, Li ₂ CO ₃	Battery components	Flammable, reacts with water	None	
Boron	10.81	5	B	13	2	p	1s ² 2s ² 2p ¹	2.04	801	0	85	60	192	2075	2550	2.34	Solid	+3, 0	B ₂ O ₃ , BCl ₃ , B ₂ H ₆	Trace elements	Corrosive, toxic	None		
Carbon	12.011	6	C	14	2	p	1s ² 2s ² 2p ²	2.55	1086	122	70	35	170	3550	4827	2.26	Solid	+4, 0, -4	CO ₂ , CH ₄ , C ₆ H ₆	Essential for life	Flammable, toxic	None		
Nitrogen	14.007	7	N	15	2	p	1s ² 2s ² 2p ³	3.04	1402	-7	56	29	155	-196	-196	1.027	Gas	+5, +3, 0, -3	N ₂ , NH ₃ , HNO ₃	Essential for life	Flammable, toxic	None		
Oxygen	15.999	8	O	16	2	p	1s ² 2s ² 2p ⁴	3.44	1314	-141	48	24	146	-183	-183	1.429	Gas	+2, 0, -2	O ₂ , H ₂ O, CO ₂	Essential for life	Flammable, toxic	None		
Fluorine	18.998	9	F	17	2	p	1s ² 2s ² 2p ⁵	3.98	1681	-328	39	19	138	-188	-188	1.899	Gas	+1, 0, -1	HF, F ₂ , CF ₄	Essential for life	Highly reactive, toxic	None		
Neon	20.180	10	Ne	18	2	p	1s ² 2s ² 2p ⁶	2.20	2081	0	38	28	140	-246	-246	0.901	Gas	0	Ne, Ne compounds	Inert gas	Non-flammable, non-toxic	None		
Sodium	22.990	11	Na	1	3	s	1s ² 2s ² 2p ⁶ 3s ¹	0.93	419	-48	186	166	227	883	1146	0.971	Solid	+1, 0	NaCl, Na ₂ O, Na ₂ CO ₃	Essential for life	Flammable, reacts with water	None		
Magnesium	24.305	12	Mg	2	3	s	1s ² 2s ² 2p ⁶ 3s ²	1.31	738	-74	160	139	173	923	1363	1.738	Solid	+2, 0	MgO, MgCl ₂ , MgSO ₄	Essential for life	Flammable, reacts with water	None		
Aluminum	26.982	13	Al	13	3	p	1s ² 2s ² 2p ⁶ 3s ² 3p ¹	1.61	743	42	118	93	143	933	2542	2.70	Solid	+3, 0	Al ₂ O ₃ , AlCl ₃ , Al ₂ SO ₄	Essential for life	Flammable, reacts with water	None		
Silicon	28.086	14	Si	14	3	p	1s ² 2s ² 2p ⁶ 3s ² 3p ²	1.90	1036	136	111	73	111	1414	2355	2.329	Solid	+4, 0, -4	SiO ₂ , SiCl ₄ , Si ₂ H ₆	Essential for life	Flammable, toxic	None		
Phosphorus	30.974	15	P	15	3	p	1s ² 2s ² 2p ⁶ 3s ² 3p ³	2.19	1012	-72	106	71	106	441	2811	1.82	Solid	+5, +3, 0, -3	P ₂ O ₅ , PCl ₃ , P ₂ H ₄	Essential for life	Flammable, toxic	None		
Sulfur	32.06	16	S	16	3	p	1s ² 2s ² 2p ⁶ 3s ² 3p ⁴	2.58	1000	-200	104	67	104											

Sheet 1 of 1

ORIGINAL
(100)

☐ ORGANIC } COMPOUNDS IDENTIFIED IN SAMPLE RESULTS
☒ INORGANIC }

(For tentatively identified compounds see Analytical Data Sheets in the appendixes)

Sheet 1 of 2

1990

Site Name: Levittown Dump

TDD No.: F3-8111-03

EPA No.: PA-282

Date of Sample: 7/14/82

☐ ORGANIC

☒ INORGANIC

COMPOUNDS IDENTIFIED IN SAMPLE RESULTS

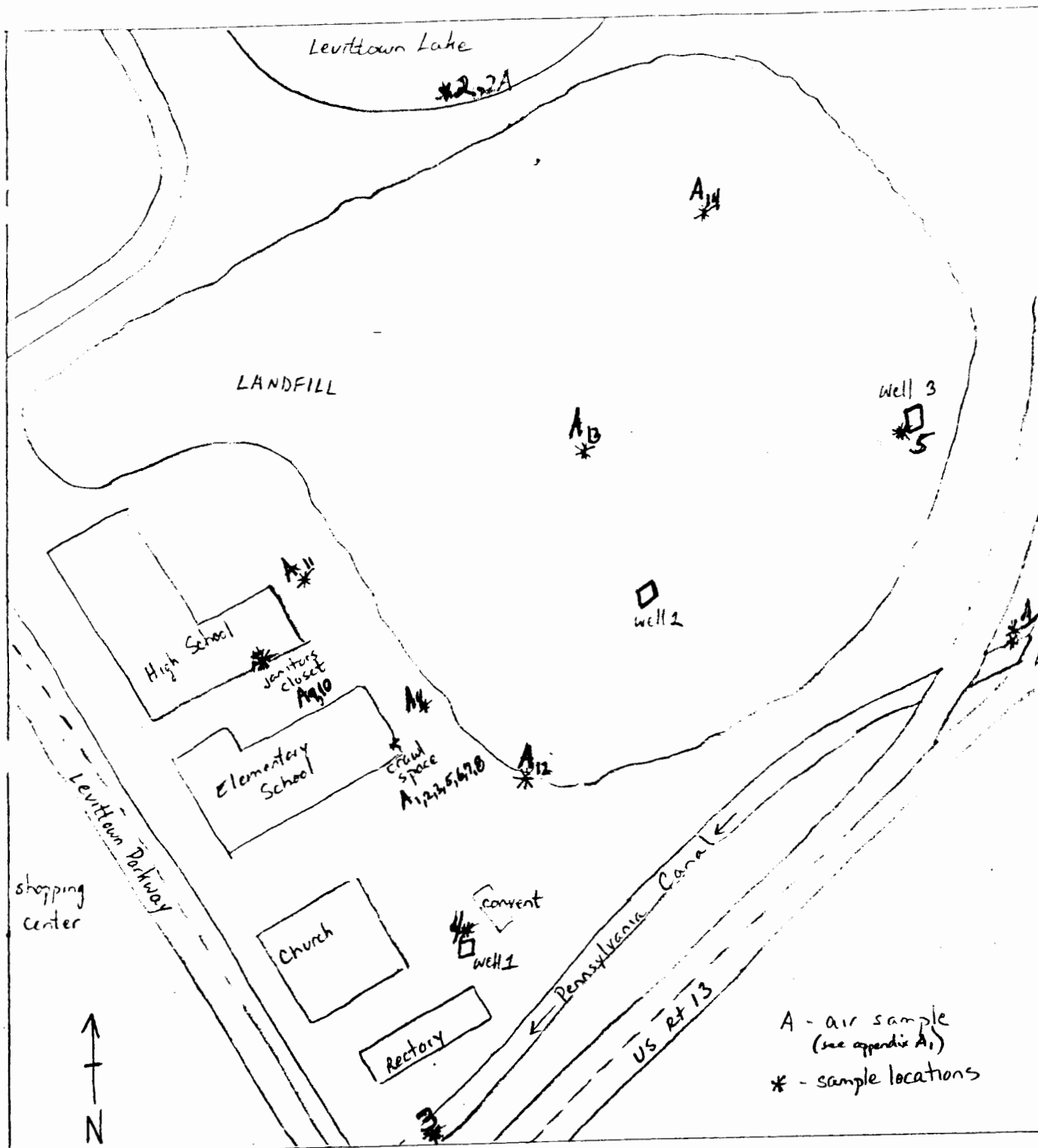
Concentrations in: ppb = ug/l - L (aqueous); ppb = ug/kg - S (solid)

(For tentatively identified compounds see Analytical Data Sheets in the appendixes)

[illegible]

11

SITE NAME: Levittown Dump
TDD NO.: F3-2111-03
EPA NO.: PA-282
TITLE: site sketch showing sample locations
FIGURE NO. 5.2



SOURCE: site sketch

SCALE: N/S

LEVITTOWN DUMP (ST. MICHAELS LANDFILL)

SUMMARY & RECOMMENDATIONS

ORIGINAL
(Red)

Summary

The site was identified to the EPA by complaint of a private citizen. The complaint was prompted by the fact that this citizen and a number of his friends had detected strange chemical type odors in the crawl space/pipe chase beneath an elementary school located adjacent to the landfill. The citizens are worried that their children are exposed to hazardous chemical vapors. Accordingly, a TDD was issued to FIT III on 6/10/80, and background study was initiated the next day. The following findings are reported:

allegations of chemicals being dumped into the site. These allegations consist of citizens complaints and inspectors comments on various reports. At one point in the official records, the operator of the site stated that he was "no longer accepting liquid wastes". Various DER reports indicate that leachate was observed on site.

3. There have been a number of fires on the site, several of which reportedly included exploding drums. One fire in 1968 required a special team from Rohm & Haas Chemical Company to assist the local fire company. The newspaper account of this fire reported that over 300 drums of chemicals exploded. There was another fire on the site on June 23, 1980; the area covered by this fire was approximately the size of a football field and yet it took three hours to extinguish. Hear-say information from people who spoke to firemen state that as soon as the fire was put out it seemed to reignite itself. Local fire departments have been uncooperative in supplying further information.

4. The site itself operated in defiance of a State Closure Order for a period of a year.

5. The hydrogeologic data indicated that the site is unsuitable as a landfill. The water table is within a few feet of the surface.

6. There are a number of reports of strange odors in the pipe chase located in a crawl space beneath the elementary school. These seem to be especially noticable after heavy rains, when the water table would be at its highest. One of these reports was given to us by the school's maintenance person, Mr. Priory.

7. In the process of walking across the landfill area, Bill Sandvik and I both noticed a chemical smell in the air, despite blowing wind, at the site.

8. There are allegations of on-going dumping at the site.

The occurrence of the fires and the chemical odor in the school may indicate the presence of a volatile gas in the area. This site has the POTENTIAL to be extremely hazardous. However, there is a possibility that the recent fires were indeed just brush fires and the odors in the basement are not dangerous. The concerned citizens, especially the parents of the students in St. Michael's school, will have to be convinced that a thorough investigation and necessary corrective action is to follow.

Recommendations

1. Perform a sampling/site visit. The sampling/site visit should be made shortly after a heavy rainfall event.

2. Perform sampling of the wells on site, the canal, the lake next to the property, and evident leachate streams.

3. Sampling in the school should consist of the following:

- a. liquid samples of any leachates.
- b. determination of volatile organics in the crawl space air via the use of an organic vapor analyzer.
- c. determination of hydrogen sulfide, mercaptan and vinyl chloride via the use of draeger tubes.

ORIGINAL
(Red)

STATEMENT	SOURCE
13. Site received liquid waste. (Potential hazard due to hydrogeology).	13. Letter to Williams from Buchanan (DER), Feb. 9, 1972
14. Liquid waste dumped into pond (later filled in) from Patterson Parchment Company.	14. Mr. Salvadore in report. Bucks Bucks County Health Dept. 1961.
15. Over 300 drums of oil and "silicon" exploded and burned in 1968.	15. Bucks County Courier Times October 7, 1968
16. Iron sludge dumped.	16. Bucks County Health Dept. Inspection Report, 1961.
17. Organic's & industrial wastes on site.	17. Inspection Report, 1961, Health Dept.
18. Site unsuitable for use as landfill.	18. Hydrogeological Survey, Bucks Co. Health Dept. (unable to obtain a copy without a court order)
19. Mr. Williams put in charge in dumping industrial wastes.	19. Inspection Report, June 28, 1961 Bucks County Health Dept.
20. Use of site as sanitary landfill prohibited unless leachate collection & treatment system is installed (even then it might be unsuitable).	20. William Bucciarelli, Jan. 2, 1973, Div. Solid Waste Management
21. Inspector noticed odor of organic solvents (possibly ethanol) suspect that liquid wastes still being dumped.	21. John M. Wand, DER October 28, 1974
22. "Innumerable areas where promiscuous dumping has occurred."	22. G.W. Buchanan, DER December 11, 1975
23. "No further dumping at landfill."	

LEVITTOWN DUMP SITE (PA 282)
TDD # F3-8006-09

ORIGINAL
(Red)

STATEMENT

SOURCE

- | | |
|--|--|
| 1. St. Michael's was owner when dump was active and is present owner. | 1. Lower Bucks County Health Dept. June, 1980 |
| 2. Complaint of well contamination was investigated and samples taken, samples indicate well was contaminated by landfill. | 2. Lower Bucks County Health Dept. Engineer, David Noll. May 22, 1975
<i>→ turbidity, iron, manganese</i> |
| 3. Not licenced to take sewage, industrial, radioactive or liquids. | 3. Lower Bucks County Health Dept. Mr. Shaeffer. June, 1980 |
| 4. Fire at dump, heavy black smoke and bright orange flame. Rohm & Haas put it out with chemicals. Indicated that fire started due to bulldozer hitting drum. Says drums pulled from ground. Fire was on July 2, 1967. | 4. |
| 5. Resin barrels dumped on site. | 5. Mr. Richard Williamson, operator of site. June, 1980. |
| 6. 3M dumped chemicals (drums). Problem with leachate. | 6. Mr. Wayne Lynn, Norristown DER June, 1980. |
| 7. Fire at dump on June 23, 1980 | 7. Bucks County Courier Times Article. |
| 8. Site operated in defiance of closure order for one year. Closed in 1974. | 8. Wayne Lynn and DER records |
| 9. Site accepted up to 10 tons of industrial waste per day. | 9. DER Inspection Reports |
| 10. Leachate was observed on site. | 10. Memo from J.M. Wand, DER Nov. 27, 1973 and April 23, 1973 |
| 11. Dump ordered closed | 11. DER, May 14, 1973 |
| 12. Operator stated "site no longer accepted liquid waste". | 12. DER Inspector Wand, March 23, 1973 |

ORIGINAL
(Red)

In summary, the site was completely accessible at various locations on its perimeter. From at least two areas, the fence perimeter was down allowing unrestricted entry. There were signs of recent dumping activity. The gas-like smell was noticed at one or two places on the site, along with an odor that resembled organic compounds, probably in some of the ketone classes, but in reality, unrecognizable. The areas where the recent fire took place were clearly obvious. The burnt out area was approximately an